Houghton-le-Spring Rural District Council.

Report

OF THE

Medical Officer of Health

For the Year ended December 31st, 1921.

HOUGHTON-LE-SPRING:
CLEMMET & GRIMES, Printers, Pottery Yard.

1922.

With

F. R. V. Langenberg's

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Manor House,
Houghton-le-Spring.

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Houghton-le-Spring Rural District Council.

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

For the Year ended December 31st, 1921.

HOUGHTON-LE-SPRING,
April, 1922.

To the Members of the Rural District Council of Houghton-le-Spring.

GENTLEMEN,

I have the honour of submitting, for your consideration, and acceptance, my seventh Annual Report of Vital Statistics and Sanitary Work for the year ended 31st December, 1921.

1.—GENERAL STATISTICS.

Area.—The area of the District in acres is (land and inland water) 13,190.

Population.—The population of the whole District in 1921 was 27,327, as returned by the Registrar-General.

Number of inhabited houses (1921), 5,525.

Number of families or separate occupiers (1921), 5,725.

Rateable Value, £136,447 14s. 2d.

Sum represented by a penny rate, £568 10s. 8d.

2.—EXTRACTS FROM VITAL STATISTICS OF THE YEAR.

Birth-rate.

The number of births registered in the district during the year was 829, and the corrected number 860, of which 416 were legitimate males, and 417 legitimate females; 13 illegitimate males and 14 illegitimate females.

This number, although less than the preceding year, compares favourably with the previous years during the war.

The subjoined table gives the number of births including the birth-rate for the last six years :—

Year.	Total Births.	Males.	Females.	Rate per 1,000.	Total Increase.
1916	633	342	291	23·80	299
1917	647	352	295	23·81	323
1918	687	338	349	25·87	282
1919	769	394	375	28·35	302
1920	1037	545	492	38·29	657
1921	860	429	431	30·9	477

In tabular form the births for the year may be represented thus :—

		Males	Females		
Births	Legitimate ...	416 ...	417	Total 860	Birth-rate 30.9.
	Illegitimate ...	13 ...	14		
		429	431		

Deaths.

The total number of deaths registered as having occurred in your district during the year 1921 was 356, comprising 178 males and 178 females, which gives the annual mortality rate of 12.76 per 1000 of the population.

Thirty-eight deaths of persons belonging to the district occurred outside the area, and 11 deaths of non-residents were transferred to other authorities, making a total of 383; the corrected death-rate being therefore 13.73, a slight decrease on the previous year.

The following table illustrates more clearly the changes in the birth and death-rates for the last ten years:—

Year.	Birth Rate.		Death Rate.		Natural Increase per 1000 Living.
1911	36·8		16·20		
1912	35·1		13·90		
1913	33·6	33·8	15·50	15·89	
1914	33·9		16.80		
1915	29·8		17·06		
1916	23·80		13·66		
1917	23·81		13·29		
1918	25·87	28·02	17·03	15·18	
1919	28·35		17·93		
1920	38·29		14·03		
1921	30·9		13·73		

The death-rate is 44.4 per cent. of the birth-rate, against 50.2, the average for the previous ten years.

The number of deaths under 5 years of age was 139, being 36.81 per cent. of the total deaths, compared with an average of 34.69 per cent. for the last five years.

Total Deaths under Five Years.

Year.	Total all Ages.	Total under 5 yrs.	Per cent. of Total Deaths.
1916	344	106	31·73
1917	324	116	36·11
1918	405	122	30·12
1919	467	167	35·76
1920	380	151	39·73
1921	383	139	34·69

Deaths from Maternal Causes.

The number of women dying in or in consequence of Child-birth.

(1). From Sepsis 1
(2). Other Causes 5

Infant Mortality.

The number of deaths of infants under one year of age to 1000 births is 118.6, represented by:

Legitimate		Illigitimate		
Males	Females	Males	Females	Total
49	48	2	3	102

Infant Mortality Rate for the past 10 years.

Year.	Total.	Rate	Year.	Total.	Rate.
1911	147	156·3	1916	73	115·32
1912	111	120·3	1917	82	126·73
1913	129	144	1918	77	112·08
1914	152	157	1919	114	148·24
1915	128	150	1920	116	111·86
			1921	102	118·6

It is to be noted that the mortality rate of infants under one year of age is in excess of the previous year, and about the average for the last ten years. This number is unfavourable when one compares it with the rates for the administrative County, and for England and Wales generally. A great deal of good can be done if expectant mothers would only attend the Clinics at the Infant Welfare Centre, learn some of the main principles of infant feeding and rearing, and note the advice given regarding their own health. Unfortunately this is not done generally, and the class that would benefit by timely advice are the ones that usually abstain from attendance.

Of the deaths during the year, 150 occurred in the first quarter, 84 in the second, 73 in the third, and 76 in the fourth.

Number of deaths and the ages at which death occurred in each Parish.

Parish.	Under 1 year	1-2 years	2-5 years	5-15 years	15-25 years	25-45 years	45-65 years	65 years & upwards	Total
Eppleton Gt. & Little...	...	...	...	...	...	...	...	...	...
Herrington E. & M. ...	1	...	...	...	...	1	...	2	4
Herrington West ...	12	2	1	2	3	7	16	14	57
Moorsley...	5	...	1	2	2	3	4	2	19
Morton Grange ...	6	...	3	3	...	2	3	8	25
Newbottle	32	3	...	6	6	12	17	25	101
Offerton	2	1	...	...	1	...	...	2	6
Penshaw	26	9	3	7	7	15	15	14	96
Rainton East	3	4	...	2	...	1	1	6	17
Rainton West	12	4	3	2	1	5	5	6	38
Silksworth	3	1	2	1	...	1	3	9	20
Warden Law	...	...	...	...	...	...	...	...	...
Moorhouse	...	...	...	...	...	...	...	...	...
	102	24	13	25	20	47	64	88	383

Twenty-two deaths occurring in the district were certified by Coroner's inquest, and seven were uncertified.

Of thirty-eight transferred deaths of persons belonging to the district the following occurred at the subjoined Institutions:

Poor Law Institution Hospital	6
Sherburn Hospital	2
Children's Hospital, Sunderland	4
Royal Infirmary, Sunderland	12
County Hospital	1
Northern Infectious Hospital	1
Pensions War Hospital, Sunderland	2
County Asylum, Sedgefield	3
Maiden Law Sanatorium	1
Royal Victoria Infirmary, Newcastle	1
Mowbray House Nursing Home	1
Total ...	34

BIRTH-RATE, DEATH-RATE, and **ANALYSIS** of **MORTALITY** during the Year 1921.

—	Birth-rate per 1000 Total Population.	Annual Death-Rate per 1,000 Population.									Rate per 1,000 Births.	
		All Causes.	Enteric Fever.	Small-pox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria.	Influenza.	Violence.	Diarrhœa and Enteritis (under 2 years).	Total Deaths under One Year.
England and Wales	22·4	12·1	0·02	0.00	0·06	0·03	0·12	0·12	0·23	0·44	15·5	83
96 Great Towns, including London (1911 Census Populations exceeding 50,000) ...	23·3	12·3	0.01	0·00	0·08	0·04	0·13	0·15	0·23	0·40	19·3	87
148 Smaller Towns (1911 Census Populations 20,000—50,000	22·7	11·3	0·01	0.00	0·05	0·03	0·11	0·11	0·26	0.35	15·6	84
London	22·3	12·4	0·01	0.00	0·05	0·06	0·12	0·25	0·23	0·42	21·3	80
Administrative County ...	30·05	13·01	0·02	0·00	0·18	0·06	0·23	0·13	0·23	...	...	109
Houghton-le-Spring, R.D.C ...	30·92	13·73	0·00	0·00	0·00	0·00	0·28	0·10	0·25	0·43	25·5	118

The deaths from the principal Zymotic Diseases were .39 per 1000 of the population, against .57, the average for the previous five years.

Population ...	*24444*	*24374*	*23687*	*26039*	*27077*	*27810*
Year	1916	1917	1918	1919	1920	1921
Measles	...	6	3	3	8	...
Scarlet Fever	3	...	...	4	3	...
Whooping Cough ...	...	1	5	5	1	8
Diphtheria	4	5	2	6	2	3
Enteric Fever	2	...	4	1	...	...
Erysipelas	...	...	1	1	2	...

For the present year the deaths arranged as to age incidence are:

Disease.	Under 5 years.	Above 5 years.	Total.
Measles	...	...	...
Scarlet Fever	...	...	...
Whooping Cough ...	8	...	8
Diphtheria	2	1	3
Erysipelas	...	...	...
Enteric Fever	...	...	...
	10	1	11

Enteritis.

The number of deaths from Diarrhœa under two years of age is 22, seventeen under one year of age and five between one and two years. Owing to the prevalence of hot weather during the summer months of last year, an outbreak of Zymotic Enteritis occurred mainly affecting those at the two extremes of life. As this condition is due to putrefactive changes which occur in food and fouled water or soil, it follows that a high temperature will aggravate and intensify mild attacks of so called "diarrhœa" in infants; and it is quite reasonable to assume that many of these diarrhœal attacks are

due to the action of bacterial agents of putrefaction or of their products when taken into the system. Among the many factors, locally, which have contributed towards the incidence of this disease are:—the use of the dumb teat; milk and other foods kept in open vessels and exposed to infection of organisms through the agency of flies, and of dust containing particles of animal excreta from the streets; or storage in pantries contaminated by drain or sewer air; overcrowding, and in many instances dark and dirty premises.

Preventive measures, if undertaken, should be mainly directed to prevent the pollution of air and soil in and around houses; and I feel that the system employed of scavenging during the day should be, if possible, altered, at any rate during the summer months, to a more desirable time when there would be less chance of food contamination. All food, particularly milk, should be sterilized and covered to protect it from pollution; and utensils conveying milk from dairies should be subjected to thorough cleansing, prior to use, under official supervision; rinsed with boiling water before being returned to the farms. Personal hygiene and domestic cleanliness should be advocated by means of posters or leaflets, and education of mothers at Infant Welfare Centres should do much to improve conditions which, to a large extent, exist in your district.

Carcinoma.

The mortality from this disease which has for the past ten years averaged 20, has during the year 1921 recorded 29 deaths. The incidence has been confined to the ages 25 years to 65 years and upwards. The causes determining the prevalence of this disease are still obscure; but certain factors exist which predispose to this disease, viz.:—damp, clay soil, low-lying areas, the abuse of tobacco and alcohol, etc. Preventive measures can only be undertaken when a definite pronouncement is made as to the actual cause of this condition.

Congenital Malformations, Debility, Premature Birth, &c.

The number of deaths during the year from these conditions is 43, which is the average for the last six years, or 11.2 per cent. of the total number of deaths for the year. In 1913 the number was 71, so that there is considerable improvement since that year. Nevertheless, it appears certain that prophylactic measures, if undertaken, should be commenced at the ante-natal period, under the supervision of officials of the Infant Welfare Centre. It is to be noted that of the 43 cases, 29 occurred in the first week of life, 18 being due to Premature Birth, one to Congenital Malformation, and ten to Debility, Marasmus, etc. There is sufficient evidence to prove that many of these cases are of syphilitic origin, and some the result of parental alcoholic over indulgence. On the other hand, one meets with mothers of large families who have to work excessively hard during the period of pregnancy to perform their domestic duties, and it is to this class of case, that some additional home help is desirable.

The total number of Infectious Diseases notified during the year was 259. The following table gives a clear indication of the number of cases for the past five years:

Diseases	1916	1917	1918	1919	1920	Average Rate for previous 5 years	1921	Attack Rate
Diphtheria	31	21	10	35	44	1·12	23	·82
Erysipelas	17	9	5	15	19	·51	10	·35
Scarlet Fever	55	54	64	131	174	3·8	103	3·7
Enteric Fever	12	10	13	8	5	·38	3	·10
Pulmonary Tuberculosis	41	38	30	44	34	1·4	33	1·1
Non-Pulmonary T.B....	21	30	31	35	24	1·1	34	1·2
Oph. Neonatorum ...	3	1	7	13	14	·3	9	·32
Pneumonia	...	...	...	69	46	2·1	42	1·5
Puerperal Fever ...	...	...	..	1	...	...	2	·07
							259	

NOTIFIABLE DISEASES DURING THE YEAR 1921.

Disease.		Total Cases Notified.	Cases admitted to Hospital	Total Deaths.
Diphtheria		23	11	3
Scarlet Fever		103	80	Nil
Enteric Fever (including Paratyphoid)		3	2	Nil
Puerperal Fever		2	Nil	1
Pneumonia		42	Nil	32
Tuberculosis:				
(a) Pulmonary	M. ... 17 F. ... 16 Total 33	33	...	25
(b) Non-Pulmonary	M. ... 13 F. ... 21 Total 34	34	...	8

The following table gives the distribution of Deaths from Zymotic Diseases in the various parishes in 1921 :

Diseases	Silksworth	Rainton West	Rainton East	Penshaw	Offerton	Newbottle	Morton Grange	Moorsley	Herrington West	Herrington E. & M.
Scarlet Fever ...		...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Whooping Cough	...	...	1	3	...	3	1	...	...	...
Diphtheria ...	...	...	...	...	...	...	...	1	2	
Typhus Fever ...	...	...	...	...	...	...	...	...	...	...
Enteric Fever ...	...	...	...	...	...	...	...	...	...	...
Erysipelas ...	...	...	...	...	...	...	...	...	...	...
Influenza ...	...	1	...	5	...	2	...	...	2	...
Enteritis ...	2	2	3	6	1	4	1	2	...	1

Ophthalmia Neonatorum.

Ophthalmia Neonatorum	Cases			Vision Unimpaired	Vision Impaired	Total Blindness	Deaths
	Notified	Treated.					
		At Home	In Hospital				
	9	7	2	8	1	...	1

There were nine cases of Ophthalmia Neonatorum reported for the year. All cases were referred to and attended by the County Health Visitors and received attention at the Infant Welfare Centre, with two exceptions which were treated in the Sunderland Eye Hospital. This number is less than that for the year 1920, when 14 cases were notified. In one case death was indirectly due to Ophthalmia Neonatorum. This was a case of illegitimacy attended by an unqualified midwife, who evidently had not recognised the eye condition and let it go on for a few days untreated. When seen by the medical practitioner, the eye was disorganised, and symptoms of Meningitis present. That "the infant died as a result of Meningitis, brought about by neglect at birth," was the verdict returned at a Coroner's inquest.

Analysis of Infectious Cases notified under the following age groups.

Disease	Under 1 year	1 year	2 years	3 years	4 years	5-10 years	10-15 years	15-20 years	20-35 years	35-45 years	45-65 years	65 years & upwards	Total
Diphtheria	1	...	...	...	1	10	9	...	1	1	...	...	23
Scarlet Fever ...	...	2	1	9	5	52	25	7	2	...	...	...	103
Enteric Fever ...	...	...	...	...	...	...	...	...	1	...	2	...	3
Puerperal Fever ...	...	...	..	...	...	...	...	1	...	1	...	...	2
Pneumonia ...	...	4	1	1	1	5	5	1	12	5	5	2	42
Erysipelas	...	...	...	...	...	...	3	...	1	1	4	1	10
Pulmonary Tuberculosis: Males ... 17, Females ... 16	...	...	...	...	...	1	...	6	17	4	5	...	33
Non-Pulmonary Tuberculosis: Males ... 13, Females ... 21	3	2	4	1	2	7	9	1	2	2	1	...	34
													250

Analysis of Deaths from Infectious Diseases under the following age groups.

Disease	Under 1 year	1 year	2 years	3 years	4 years	5-10 years	10-15 years	15-20 years	20-35 years	35-45 years	45-65 years	65 years & upw'ds	Total
Diphtheria	1	...	1	...	...	...	1	...	...	...	...	...	3
Scarlet Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever ...	...	...	...	...	...	...	...	...	...	1	...	...	1
Pneumonia	6	7	2	...	...	5	1	...	3	4	2	2	32
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary T.B. ...	...	...	...	...	...	...	3	6	11	2	3	...	25
Non-Pulmonary T.B. ...	1	2	1	...	...	2	1	...	...	1	...	...	8
													69

Small-pox.

The district has enjoyed complete immunity from this disease since the Penshaw outbreak 10 years ago. Should occasion arise however, the conjoint Small-pox Hospital for the use of the whole Union is in readiness for any emergency.

The number of vaccinations performed during the year by the Medical Officer of Health under the Public Health (Small-pox) Prevention Regulations 1917, is:

(a) Primary Vaccination 87
(b) Re-Vaccination 1

Typhus Fever.

No case of this disease has occurred in this district for many years.

Scarlet Fever.

Has prevailed in the district during the whole year. 103 cases were notified as such compared to 174 the year before. Of these 50 occurred in the fiirst quarter, 16 in

the second, 13 in the third, and 24 in the fourth. The attack rate for the year was 3.7 and mortality NIL.

The chief centres of activity were Penshaw (30), Rainton East (26), Herrington West (13), Silksworth and Newbottle (12) each.

In the Penshaw District four cases occurred in one house at Model Terrace. Three cases in adjoining houses at Douglas Terrace, and two in one house at Victoria Terrace.

In the West Herrington Area, two cases occurred in Farm House, Fenton Terrace and New Pit Cottages.

In the Silksworth District most of the cases were reported from Warwick Terrace and Somerset Street, and two cases were notified from one house in Somerset Cottages.

In the Rainton East Area, there were three or four centres from which other cases developed. In Dunwell and Front Street, there were three cases in one house, two cases at the Hazard Pit and in the Middle Rainton Section, two cases in one house at Gate Row and at the Hope and Anchor Inn.

It is interesting to note the prevalence of Scarlet Fever after attacks of Acute Nasal Catarrh and one such instance occurred in a house in Station Avenue, Morton Grange. Eleven months previously there were two cases of Scarlet Fever which were isolated and recovered. Another child in the house who had escaped the primary attack, contrived to get the disease, after all three were attacked by Nasal Catarrh.

As to age incidence, 77 cases occurred between the ages of five and fifteen years. Compared with the

previous year the following table indicates the age incidence and deaths.

	Under School Age	School Age	Above School Age	Total
1920	33	123	18	174
Deaths	1	1	1	3
1921	17	77	9	103
Deaths	Nil	Nil	Nil	Nil

Whooping Cough.

Whooping Cough was present in the earlier months of Summer and late Spring, and attacked the younger children, mostly one year and under. The fatal cases were due in most instances to pulmonary complications, and were confined to those under five years of age.

Diphtheria.

The number of cases notified during the year was 23, a decrease of 21 or nearly 50 per cent. on the previous year the attack rate being .82 per 1000 of the population, and a mortality rate of .13 per cent.

For comparison with the previous year, the following table shows:—

	Under School Age	School Age	Above School Age	Total
1920	6	31	7	44
Deaths	1	1	Nil	2
1921	2	19	2	23
Deaths	2	1	Nil	3

Locality.—Most of the cases occurred in the Newbottle Area (11), Herrington West (5).

In the Newbottle Area, four cases occurred in the latter part of the second quarter in the Grasswell District, and three cases occurred in one house at George Street, Dubmire.

In the New Herrington District two cases occurred in one house at Lanton Street.

When any doubt exists as to the nature of the condition, advantage is taken on occasion by practitioners to submit swabs for bacteriological examination to the College of Medicine, Newcastle-on-Tyne. Antitoxin continues to be supplied free to Medical Practitioners when applied for, and is generally used.

Enteric Fever.

Three cases were notified during the year with an attack rate of .10, compared with .18 for the previous year, and mortality NIL.

All the cases originated in the Newbottle District, one in each in Shop Row, Philadelphia, Success Cottages and Wellington Row.

Two of the cases were treated in the Northern Infectious Hospital, and the other was convalescent when notified.

One of the most satisfactory features in the health of the District during the past few years has been the marked decrease in the prevalence of this disease which has its origin in insanitary conditions.

Puerperal Fever.

Two cases of this disease were notified, one in the Dubmire district and the other from East Herrington in the same house to which your Medical Officer drew the Council's attention to on a previous occasion when

two cases of Diphtheria developed in the same house. This house is insanitary, and damp, and should not be used unless it is made more habitable.

Erysipelas.

Ten cases were reported during the year representing an attack rate of .3 per 1,000 compared with .7 for the preceeding year. Three cases were between 10 to 15 years, and four between 45 to 65 years. Mortality NIL.

Pneumonia.

There have been 42 cases of Pneumonia of all forms notified during the year representing an attack rate of 1.5. The greater number of cases occurred in the first and second quarters of the year when the meteorological conditions were favourable to its incidence, and a few cases of Influenza present. The deaths from this disease numbered 32, which is 8.3 per cent. of the total number of deaths.

Tuberculosis.

Under the Public Health (Tuberculosis) Regulations Order 1912, 67 notifications were received in respect of 33 Pulmonary and 34 other forms of this disease as compared with 34 Pulmonary and 24 other forms of Tuberculosis for 1920. The attack rate for the present year being 1.18 per 1,000 for Pulmonary, and 1.19 for other forms of Tuberculosis.

There have been 33 deaths from Tuberculous Diseases during the year, representing a rate of 8.6 per cent. of the total number of deaths.

Notification of Cases.

Although there has been an improvement in the notification of these cases compared with previous years,

there are still a few isolated instances where your Medical Officer learns of a case through the medium of the County Health Visitor's Weekly Report. The probable explanation may be that Medical Practioners in charge of cases may be dubious about the actual physical state of patients, and refer them to the Dispensary for confirmation. He hears nothing more from them as they continue to attend the Clinic; consequently the only source of information is the Health Visitors. In several instances your Medical Officer has written to the offending Medical Practitioners and last year a circular letter was issued to all local doctors pointing out the necessity for early notification and their obligations to your Council.

The number of deaths from all Tuberculous Diseases in 1921 is 33, of this number 29 were notified, 4 were not notified.

Pulmonary cases received Institutional treatment at different Sanatoria in the County, viz:—

Maiden Law Sanatorium	1
Children's Sanatorium Morpeth ...	1
Hebburn Sanatorium	1
Sunderland Sanatorium	1
Holywood Hall Sanatorium ...	3
Stannington	3
TOTAL	10

The Non-pulmonary cases received treatment at the following Hospitals.

Royal Infirmary, Sunderland ...	5
Monkwearmouth Hospital	2
Children's Hospital, Sunderland ...	1
TOTAL	8

As to age incidence, the following table gives the age distribution of Pulmonary Cases.

Pulmonary Cases.

Parish.	Under 1 yr.	1-2 yrs,	2-5 yrs.	5-15 yrs.	15-25 yrs.	25-45 yrs.	45-65 yrs.	65 up	Total
Newbottle	...	...	...	...	3	3	1	...	7
Moorsley	...	...	...	...	1	2	...	...	3
Penshaw	...	...	...	1	5	5	1	...	12
Herrington W. ...	...	...	...	...	...	2	2	...	4
Rainton W.	...	...	...	1	...	1	1	...	3
Rainton E.	...	...	...	...	1	...	...	...	1
Silksworth	...	...	...	...	...	2	...	...	2
Offerton	...	...	...	...	...	1	...	...	1
									33

Non-Pulmonary Cases.

Parish	Under 1 yr.	1-2 yrs.	2-5 yrs.	5-15 yrs.	15-25 yrs.	25-45 yrs.	45-65 yrs.	65 up	Total
Newbottle	2	2	1	5	...	...	1	...	11
Moorsley	...	...	...	...	...	...	...	...	...
Penshaw	...	...	2	3	1	...	...	...	6
Herrington W. ...	...	...	...	3	...	1	...	...	4
Rainton W.	...	...	2	1	...	...	...	...	3
Silksworth	...	...	1	2	...	...	...	...	3
Rainton E.	1	...	1	...	...	...	...	...	2
Offerton	...	...	...	...	1	2	...	...	3
Morton Grange ...	...	...	...	2	...	...	...	...	2
									34

Of the 34 cases of Non-Pulmonary Tuberculosis, the following table gives a classification of the different sites of the disease.

Meninges	3
Bones and Joints	4
Cervical Glands	15
Abdominal	9
Eye	1
Skin	1
Throat	1
TOTAL	34

For the treatment of Tuberculous subjects in your district, the County Council have provided Sanatoria and Dispensaries in various parts of the County.

Residents at :— Rainton E., Rainton W., Moorsley, Great and Little Eppleton, attend	SHERBURN HOSPITAL. Tues : 9 a.m., Women & Children. Fridays : 9 a.m., Men.
Residents at :— Morton Grange and Dubmires attend	CHESTER-LE-STREET DISPENSARY. Tues : 9 a.m., Women & Children. Fridays : 9 a.m., Men.
Residents at :— Newbottle, Penshaw, Silksworth, Offerton, & Warden Law, attend	SUNDERLAND DISPENSARY. 31 WEST SUNNISIDE. Wednesdays : 10 a.m., Men. Thursdays : 10 a.m., Women.

Suitable cases after being examined by the Tuberculosis Officer in charge are recommended for admission to various Hospitals and Sanatoria, and for domicilary treatment under their Medical Attendant.

There are however the advanced cases, for whom no adequate provision is made, and which constitute a great source of danger to inmates in a household, particularly at present when there is so much overcrowding, poverty, and distress. This type of case should receive treatment in Hospitals set apart from Sanatoria, and should not be allowed to remain in these small overcrowded houses. There have been many instances of fresh cases set up in the same house through improper isolation and care, and I fear there will be many more unless steps are taken to segregate this class of case.

Amongst the many factors which have predisposed to these diseases in recent years, there can be no doubt that pulmonary complications following influenza have tended to increase the number of tubercular cases in the community, and experience of these waves of influenza only confirms the view that the number of cases of the pulmonary type is greatly augmented after an epidemic, where pleurisy and pneumonia are outstanding features.

Measles.

The district has been free of this disease during the year, with one or two isolated exceptions. There have been no deaths reported.

Influenza.

Influenza has been prevalent in the district during the Spring months. The types present were gastric, pulmonary, renal and cerebral. Although the number of cases was large, the severity of the disease was not so marked as in some epidemics. It is probable that this disease will remain latent, and break out in a few months with renewed virulence.

Deaths were recorded from this disease during the year.

It is to be noted that many of the cases of the Pulmonary type with copious sputum and persistent cough ultimately terminate in chronic Bronchiectasis or Tubercular lung. Many of the subjects of the 1918 epidemic have developed Tuberculosis, and this predisposition with other contributing factors, such as unsuitable food and overcrowding largely accounts for the increasing number of cases recorded after an epidemic.

CAUSES OF SICKNESS.

Acute Nasal Catarrh and Adenoids.

One of the commonest ailments in your district is the so-called "cold in the head" amongst children. On a cold winter's day, it is no uncommon sight to find an infant with the skin around the nostrils, and the upper lip sore and red, marked here and there with herpetic vescicles, and usually a flow of an irritating watery fluid or purulent discharge through the nose. In conditions of health, the nasal mucus is said to inhibit the growth of pathogenic organisms, very few of which are to be found

within the nasal cavities. Through predisposing pathological causes, and the entrance of the specific micro-organism of acute nasal catarrh into the nasal cavity it seems reasonable to suppose that the causal factor gains an entry into the general system producing local and constitutional symptoms. Is it not possible to assume therefore that the germs of some grave disease, which occasionally follow in the wake of a neglected cold may produce characteristic local and functional disturbances through the same channel? The answer to this is plainly in the affirmative. There are many diseases of an infectious nature which have their origin in the nasal cavity viz:—Measles, Whooping Cough, Scarlet Fever, Diphtheria, etc., to name only a few; and it seems to me that the local condition if persistent will also result in hypertrophic changes in the cavity, impeding the passage of air to and from the lungs, cause mouth breathing, and a proclivity to chest complaints. A great many of the diseases in your district are directly or indirectly attributable to these nasal conditions, and it is surprising what a large percentage of children are affected by it. If parents would accept more responsibility, and exercise more care in the treatment of a "head cold" in children, many of the prevalent infectious and respiratory diseases would diminish or become negligible.

Rheumatism, and other Arthritic Diseases.

The district being clayey, and exposed to sudden changes of weather owing to its proximity to the North East Coast, rheumatism, both arthritic and muscular is prevalent in the colder months of the year. Though common to all, the miners as a class suffer most owing to exposure to varying cliamatic conditions, and their strained attitudes at work.

Oral Sepsis and Pyorrhoea.

The commonest cause of most cases of sickness and

invalidity in the district may be attributed to decayed and neglected teeth. It is the exception rather than the rule to find a person armed with a tooth-brush, and using it as it should be used. The ignorance of the public with regard to their teeth is not merely great, it is monumental! The creed as I observe it at the present day is, if a tooth aches, have it out; if it does not, leave it alone. Much has been said and written about the degeneracy of the race, and a C3 population, and one at least of the causes is the almost universal existence of dental disease, and the resulting condition of oral sepsis.

Some attempts have been made by educational, and municipal authorities, and proprietors of factories, to establish dental clinics, and though it is a step in the right direction, it does not deal with the problem of the community as a whole. This is a national question that before long must compel the attention of those in high places.

SUMMARY OF NURSING ARRANGEMENTS, HOSPITALS AND OTHER INSTITUTIONS IN THE DISTRICT.

Professional Nursing in the Home.

(a) General.—In isolated districts, the employment of a nurse for that particular district is established by private clubs or Church organizations, but in your district it is not general.

(b) For Infectious Diseases.—By arrangement with the County Council, Health Visitors attend and advise parents or guardians on the conduct of these cases; and if necessary the services of the Staff of the Infectious Hospital may be utilized in emergency.

Midwives

The number of Certified Midwives in your Area is three and of this number, only one practices in the District.

They are not employed or subsidized by your Council

CLINICS AND TREATMENT CENTRES.

Maternity and Child Welfare Centres.

The Houghton-le-Spring Centre situated in Newbottle Street, Houghton-le-Spring serves the Urban and Rural Districts. The Medical Officer in Charge, appointed by the County Council, attends and holds consultations on

Mondays	9-30 a.m. to 11-30 a.m.
	1-30 p.m. to 3-30 p.m.
Thursdays	9-30 a.m. to 11-30 a.m.

Advantage is taken by mothers in your district to attend these clinics, but the attendances are not so full as might reasonably be expected.

Day Nurseries.

There are no day nurseries in your district.

School Clinics.

There are no School Clinics established in the Rural Area, but children in schools are periodically inspected by Medical Officers under the direction of the County Medical Officer.

Tuberculosis.

A list of the several dispensaries serving the Rural Area appears under the heading "Tuberculosis."

Venereal Diseases.

For the treatment of Venereal Diseases the County

Council have made arrangements with the following Hospitals to serve your district:—

Royal Victoria Hospital, Newcastle-on-Tyne.

Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
8-30 a.m. and 3-30 p.m. Women	8-30 a.m. Men 6-0 p.m. Women	8-30 a.m. Women 3-30 p.m. Men	8-30 a.m. Men 6-0 p.m. Women	8-30 a.m. Women 3-30 p.m. Men	8-30 a.m. Men

Royal Infirmary, Sunderland.

Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
6-30 p.m. Men	9-0 a.m. Women	2-30 p.m. Women	10-0 a.m. Men	2-30 p.m. Men	2-30 p.m. Men

County Hospital, Durham.

Tuesday 3-0 p.m. Men. Friday 3-30 p.m. Women.

Regarding Venereal Disease there is still a large number of cases in your district. Cases coming under observation of local practitioners are sent to the nearest Clinic for treatment, but unfortunately many cease attendance before completion of treatment owing to disappearance of visible symptoms, apathy, ignorance, fear of exposure, and inconvenience caused by having to travel daily a distance of six miles. It would be a great advantage therefore if an irrigation centre be set up in the town, so as to save time and expense to those who though ready to avail themselves of the opportunities afforded, are precluded from doing so owing to the reasons mentioned.

HOSPITALS.

(1) Tuberculosis.

There are various Sanatoria to which residents within your District, are sent on the recommendation of the D.T.M.O. and which are administered by the County Council.

1.	Wolsingham Sanatorium	.. ...	95 beds
2.	Blackfell ,,	... ...	38 ,,
3.	Maiden Law ,,	... ...	42 ,,
4.	Sealburn ,,	... ...	22 ,,
5.	Helmington Row ,,	... ...	14 ,,
6.	Tindale Crescent ,,	... ...	12 ,,
7.	Hebburn ,,	... ...	24 ,,
8.	Sunderland Rural ,,	... ...	14 ,,
9.	Stannington ,,	(Children only)	70 ,,
	30 beds for Surgical cases		
		TOTAL	331 ,,

Hospitals for Surgical Tuberculosis.

The County Council have entered into an agreement for the admission and treatment of Surgical cases of Tuberculosis with the following General Hospitals in the County, on the recommendation of and after being examined by the D.T.M.O.

1. Gateshead Childrens' Hospital
2. Durham County Hospital
3. Sunderland Royal Infirmary
4. Children's Hospital Sunderland
5. Southwick and Monkwearmouth Hospital
6. Royal Victoria Hospital, Newcastle-on-Tyne

(2) Maternity.

The formal opening of the Durham County Maternity Home, Bishop Auckland, took place on April 27th, 1921. The distance from this district is too great to allow prospective mothers to avail themselves of the opportunity afforded for personal and economic reasons.

(3) Children.

The Children's Hospital at Sunderland is available for children residing in the district. It is subsidized by workmen's and voluntary contributions.

(4) Fever.

The Northern Infectious Hospital situated at Junction Row, Fence Houses, is within the District, and is subsidized by your Council. The original Hospital

was built of corrugated iron and erected in 1893. In addition to the administrative block it had three wards, each of which was provided with six beds. Subsequently, four additional wards of similar construction and size, three bed-sitting rooms, bath rooms and wash-away conveniences were added to the building The accomodation provided is as follows :—

Scarlet Fever	No. 1 ward	6	beds
	No. 2 ,, ...	6	,,
	No. 3 ,, ...	12	,,
Diphtheria	No. 1 ,, ...	5	,,
	No. 2 ,, ...	5	,,
Enteric Fever	No. 1 ,, ...	10	,,
Erysipelas etc.	... ...	6	,,
Observation ward	... ...	6	,,
	TOTAL	56	,,

Staff.

The administration of the Hospital is carried out by your Medical Superintendent with the help of a Head fully-trained Nurse and two probationer nurses. The management of the Hospital buildings is entrusted to the Caretaker, who, in addition to supervising the transit of patients to and from hospital also has charge of the disinfecting apparatus. The caretaker's wife looks after and provides the feeding of the inmates and nurses, and also the domestic arrangements of the Hospital.

Changes in the Staff.

The Head Nurse Elliott, resigned her position on on July 21st, giving the usual term's notice, and Head Nurse Caine was appointed by your Council to fill her position.

Probationer Nurse Young, reported as being inefficient, was given a term's notice, and Probationer Rice was appointed. Nurse Caine and Probationer Rice took up their duties on Nov. 1st, and Oct. 25th, respectively.

Working of the Staff.

With one exception, the work of the Staff has been satisfactory, notably in the earlier part of the year, when there was a great influx of Scarlet Fever cases. I cannot but commend the attention and care bestowed on these cases by the nurses in charge, and it is due to their efforts that all the patients made good recovery.

Cases treated in Hospital during the year.

Scarlet Fever	...	...	80
Diphtheria	...	...	11
Enteric Fever	...	...	2
Erysipelas	...	...	1
		TOTAL	94

All cases ended in recovery with the exception of one patient suffering from malignant septic diphtheria from Moorsley, who died 24 hours after admission.

Renovations and Additions to Hospital.

As a result of the recommendation to have a hot water system to the bath rooms and sinks in order to avoid the necessity of having to carry the water by hand, your Council has had installed a new boiler and house at the North side of the Administrative block. The boiler is in good working order, and has supplied a much needed want.

(b) The alteration to the pipes along the corridors have been carried out, but is not quite satisfactory up to the present.

(c) Recommendations from your Medical Superintendent to have the spoutings repaired and cleaned, were carried out, as most of the pipes were choked,

(d) At a meeting of your Hospital Committee on October 26th, it was resolved to channel the North Side of the Hospital owing to want of proper drainage and the

dampness arising therefrom notably in the corridors and diphtheria wards. The work is being carried out, and the excavations have confirmed the decision of your Committee that it has been very necessary.

(5) Small-pox.

A Small-pox (Conjoint) Hospital jointly held by the Houghton-le-Spring and Hetton Unions is available for the reception of these cases. It has accommodation for 38 beds for emergency cases. There is also provision for the isolation of contacts, should such a contingency arise. It has not been in use during the year, but is always in readiness for occupation.

The administration of the Hospital is carried out by the Medical Officer in Charge, also by a resident caretaker and his wife who look after the premises and keep the wards in order.

(6) Other Hospitals.

As General Hospitals, those most favoured in the district are :—

The Royal Infirmary, Sunderland
The Royal Victoria Infirmary, Newcastle-on-Tyne
The County Hospital, Durham

Institutions.

As provision for unmarried mothers, illegitimate infants and homeless children, the Houghton-le-Spring and Hetton Poor Law Institution is available. It is situated in Houghton-le-Spring Urban district.

Ambulance facilities.

(a) For infectious cases. A horse ambulance is kept at the Northern Infectious Hospital for the transmission of cases.

(*b*) For non-infectious cases and accidents.—The various Collieries in the district have their own horse ambulance for the transport of any accidental cases at their respective pits. The Houghton-le-Spring Colliery in addition has a motor Red Cross Ambulance for which a fee is charged to convey needful cases to Hospital.

Laboratory work.

By arrangement with the County Council provision is made whereby Medical Practitioners may submit specimens to the Bacteriological Department of the College of Medicine, Newcastle-on-Tyne, for examination and report. During the year specimens were submitted with the following results:—

		Positive	Negative	Doubtful
Diphtheria	...	4	2	—
Enteric Fever	...	—	2	1
Tuberculosis	...	17	25	—

WATER SUPPLY.

1. Owing to the drought, and intermittent supply of water to East Rainton, your Council suggested a supplementary supply for use at the Public Well, Nicholson's Lane, East Rainton, but before doing so agreed to have the same submitted for analysis. Two samples were taken and sent to Prof. Hutchens, Newcastle, and to C. J. Stock, Esq., Darlington. The following are copies of their respective reports :

Prof. Hutchen's Report re Public Well, Nicholson's Lane, East Rainton.

No. of Organisms per c.c.				No. of Organisms.
On Agar at 37° c.—48 hours	...	...	...	705
On Gelatin at 22° c. ,,	...	...		uncountable

Colon Bacillus Test :

Flaginac colon bacilli present per 10 c.c., but not in 1 c.c.
Bacteriologically this specimen is termed " Doubtful."

Copy of Chemical Analysis by C. J. Stock, Esq.

	Parts per 100·000
Chlorine as Chlorides	3·0000
Nitrogen as Nitrates	·0112
Ammonia	·0042
Albuminoid Ammonia	Nil
Oxygen Absorption	·0260
Injurious Metals	Nil
Total Solid Matter, dried at 100° c.	61·0000
Temporary Hardness	19·6000
Permanent Hardness	18·4000

Colour and appearance in 2-ft. tube—Fairly colourless, not clear.

Odour when heated to 50° c.—Faint vegetable.

Microscopical Examination:

Considerable deposit from half-gallon, consisting of earthy matter, decomposing vegetable matter, fungus, growths, and innumerable micro-organisms of various types.

Observations:

The Chemical Analysis of this sample does not indicate that there is pollution by sewage, either recent or otherwise. There is, however, unmistakable evidence in the results of the microscopical examination of contamination by impurities derived from the surface, which, in my opinion, is sufficient to render it unfit for human consumption, or for use in dairying operations.

2. Owing to the difficulty of obtaining a constant supply of water to the inhabitants of cottages at Meadows Pit, Middle Rainton, your Council proposed to submit two samples from different sources, viz.:—from Spring above Meadow Pit, and another from Nicholson's Pit, for analysis.

From Meadow Pit.—The following reports were received from Prof. Hutchens and C. J. Stock, Esq., relating to this sample.

Copy of Report by Prof. Hutchens.

Colon Bacillus Test:

"Flaginac" colon bacilli present in 0·1 c.c., but not examined in smaller quantities.

Number of Organisms per c.c.:

On Agar at 37° c.—48 hours ... 275.

Copy of Chemical Analysis by C. J. H. Stocks, Esq.

	Parts per 100·000
Chlorine as Chlorides	2·7500
Nitrogen as Nitrates	·4838
Ammonia	Trace
Albuminoid Ammonia	·0046
Oxygen Absorption	·0428
Injurious Metals	None
Total Solid Matter, dried at 100° c.	40·0000
Temporary Hardness ... 7·20°	
Permanent ,, ... 10·00°	

Colour and appearance in 2-ft. tube—Yellowish green, not clear.

Odour when heated to 50° c.—None.

Microscopical Examination:

Considerable deposit from half-gallon, consisting of earthy matter, decomposing vegetable matter, fungus growths, micro-organisms, etc.

Observations:

While there is no definite evidence of pollution by sewage to be found in the results of the chemical analysis, the figure for Nitric Nitrogen is higher than I should expect in a pure water from this district. The microscopical examination indicates that there is contamination by surface impurities. As a result of my analysis I would suggest a thorough examination of the surroundings of the source of this sample.

On 24th November, owing to the indefinite opinion expressed in Prof. Hutchen's report, a further sample was taken at the Meadows Pit, about 20 ft. higher than the original sample, and another sample from Nicholson's Pit. Prof. Hutchen's reports as follows:

No. 1 Spring Water from Meadows Pit.

No. 2 Spring Water (tank collected), from Nicholson's Pit.

In both samples "flaginac" colon bacilli were present in 0·1 c.c., but not in 0·01 c.c.

No. of organisms per c.c.

On agar at 37°—48 hours.

Sample No. 1	800 per c.c.
Sample No. 2 ...	125,000 ,,

ADOPTIVE ACTS.

List of Adoptive Acts, Bye-laws and Local Regulations relating to the public health in force in the district with date of adoption.

Adoptive Acts.

Public Health Amendment Act, 1907. In force in whole of Rural District.

Sections 15, 16, 17, 18, 20, 22, 24, 26, 27, 28, 29, 30, 31, 32, and 33 of Part II.

Sections 34, 35, 36, 37, 38, 43, 44, 45, 46, 48, 49 and 50 of Part III.

Bye-laws.

Regulations under Dairies, Cowsheds and Milkshops Order, 1885, came into force 1st March, 1888.

Nuisances.—In force in East Rainton, Moorsley, Newbottle, Penshaw, Silksworth, West Herrington, West Rainton, 19th April, 1902.

Slaughterhouses.—In force in Herrington West, Moorsley, Morton Grange, Newbottle, Penshaw, Rainton East, Rainton West and Silksworth, 3rd September, 1914.

New Streets and Buildings.—In force in whole of Rural District, 23rd August, 1904.

Cemeteries.—In force in Eppleton Great and Eppleton Little, 25th May 1891.

SANITARY ADMINISTRATION.

Summary of work done in the Inspector of Nuisances' Department during the year 1921.

I. Public Health Acts.		Number of Informal written Notices by Inspector	Number of Formal Notices by order of Authority	Number of Nuisances abated after Notice
Dwelling-houses and Schools ...	Foul Conditions ...	7	3	7
	Structural Defects ...	128	44	86
	Overcrowding	36	4	6
Lodging Houses		None	in District.	
Dairies and Milkshops		3	1	3
Cowsheds		1	...	1
Bakehouses		1	...	1
Slaughter-houses		3	...	3
Ashpits and Privies		84	24	56
Deposits of Refuse and Manure		5	1	5
Waterclosets		18	4	18
Defective Yard Paving		12	3	9
House Drainage	Defective Traps ...	18	7	18
	No Disconnection ...	2	1	2
	Other Faults	126	32	126
Water Supply		22	...	22
Pigsties...		5	2	4
Animals Improperly Kept		2	...	2
Offensive Trades		...	...	...
Smoke Nuisances		...	...	...
Other Nuisances		...	...	...
Totals		473	126	369

II.—Water, Food, and Drugs.	Number.
Samples of Water taken for Analysis...	4
,, ,, condemned as unfit for use	2
Seizures of Unwholesome Food	1
Convictions for exposing or selling Unwholesome Food ...	...
Samples of Food and Drugs taken for Analysis	...
,, ,, found Adulterated	...
III.—Precautions against Infectious Disease.	
Lots of Infectious Bedding stoved or destroyed... ...	196
Houses disinfected after Infectious Disease	217
Schools ,, ,, ,, ...	...
Prosecutions for exposure of infected persons or things ...	...
Convictions for ,, ,, ,, ...	...
IV.—General.	
Number of New Houses erected during the year ...	32
Number of such Houses occupied during the year ...	32
Ashpit-privies converted into Ash-closets	10
,, ,, Water-closets	...
Ash-closets ,, ,, ,, ...	24
Total number of Water-closets in District	285
,, Ash-closets	4355
,, Ash-pit privies	488

Inspection of Plans where Food is prepared.

The Bakehouses in the district have been systematically inspected, and were found to be clean and well kept. During the war a considerable number of small shops were opened where articles of food were either prepared or exposed for sale. The number of fried fish shops has also increased, in many cases one of the living rooms has been utilized for this purpose, and the conditions prevailing in many of these places are not altogether satisfactory.

Slaughter Houses.

The following are particulars of the Slaughter Houses in the district:

Registered	... ...	2
Licensed	... ...	10
	Total ...	12

One new slaughter house was erected during the year at East Rainton. The two registered slaughter houses are very old and poorly constructed. The whole of the slaughter houses are regularly inspected and found to be well kept. Attention is given to general cleanliness, limewashing, and removal of offal.

Disinfection, etc.

A Reck Steam Disinfector is installed at the Infectious Diseases Hospital, and the bedding, etc., from infected houses is taken there for disinfection. In addition, liquid disinfectant is supplied to families where cases of infectious disease occurs, and the rooms are fumigated.

Dairies, Cowsheds and Milkshops.

The milk supply is almost wholly produced within the district, which contains many well-managed dairy

farms, The cows kept are of a superior class, and comprise some of the finest herds to be found in the country.

Generally speaking, the cowsheds and dairies are found to be well kept and all are provided with a good water supply. They are periodically inspected and careful attention is paid to the lighting, ventilation, air space, and drainage of the buildings, and the cleanliness of the cattle, dairies and utensils.

Food and Drugs Act, and Milk and Cream Regulations.

These are administered by the County Council, who recently appointed a resident officer for the Houghton District.

Part IV. In force in Herrington West, Moorsley, Morton Grange, Newbottle, Penshaw, Rainton East, Rainton West, and Silksworth.

Section 21 of Part II.

Sections 39, 40, 41, and 42 of Part III.

In force in Offerton. Section 21 of Part II.

In force in Herrington East and Middle. Section 39, 40, 41, and 42 of Part III.

The Order under Seal of the Local Government Board, dated 17th August, 1911, and numbered 57,246, came into operation on the 28th September, 1911.

Private Street Works Act, 1892, in force in respect of certain streets in Parishes of Penshaw and Newbottle.

PUBLIC HEALTH STAFF.

The Staff consists of—

Medical Officer—Part time. Degree of M.B., C.M., Edin.

Senior Sanitary Inspector—Whole time. Holding Certificate of the Royal Sanitary Institute.

Junior Sanitary Inspector—Whole time. Holding Certificate of the Royal Sanitary Institute.

Health Visitors—Appointed by the County Council. Holding Nursing Certificates, etc.

Head Nurse to the Northern Infectious Hospital—Whole time. Holding Certificate for Nursing.

It is with deep regret I have to record the death of your Senior Sanitary Inspector, Mr. W. Morley, which took place in September of last year. The late Mr. Morley was an active and enthusiastic official of your Council for the last 33 years, and those members of your Council who have been associated with him during their term of office, will agree with me when I say that the interest he took in his work, and the knowledge he possessed of the district, were factors which helped to build up the reputation which he so deservedly earned.

HOUSING.

Number of New Houses erected during the year:

(a)	Total	68
(b)	As part of a Municipal Scheme	36

Progress Made up to 31st December, 1921.

Newbottle Site.—For 72 Houses. Roads and sewers contract in hands of contractor, who has completed all sewers, but has still the finishing off of roads to do. Ten houses of Class "B" have been built, all of which are completed and occupied.

New Herrington Site.—For 100 Houses. Roads and sewers in same stage as stated for Newbottle. Contracts for 50 houses have been let for this site, 18 being Class "A", and

32 Class "B." 30 houses have been completed, and now occupied, ten of these being Class "A", and 20 Class "B".

Penshaw Site.—For 125 Houses. Roads and sewers contract in same stage as for Newbottle. Contracts for 50 houses have been let, 30 being Class "A", and 20 Class "B"; of these, 12 houses are now completed and occupied, 12 Class "A", and none of Class "B".

Silksworth Site—For 100 Houses. Roads and sewers as for other sites above. Contracts here for 42 houses, have been let, 20 being Class "A", and 22 Class "B"; of these no houses are complete and occupied.

Fence Houses Site.—For 100 Houses. Roads and sewers contract has been carried out and completely finished on this site, but so far no houses have been built, the Ministry of Health having turned down proposals on account of cost.

East Rainton Site.—For 100 Houses. A contract for half of the roads and sewers has been let for this site, and the work is in progress. The sewers are laid and connected up. Road work is ready for tar macadam topping. No houses have, so far, been arranged for this site, the cost being considered too high by Ministry of Health when tenders were submitted.

West Rainton Site.—For 150 Houses. Land has been purchased, but so far nothing has been done on the site. Lay-out plans have been approved of, and tenders for part of the roads and sewers sanctioned by the Ministry of Health, but the work has to be held over until approval is given to acceptance of tenders for houses, which, so far, have been considered too high.

1. Unfit Dwelling Houses:

Inspection	(1) Total number of dwelling houses inspected for Health Department under Public Health or Housing Acts	438

(2) Number of dwelling houses inspected and recorded under Housing Regulations, 1910 125

(3) Number of dwelling houses found to be unfit for human habitation 4

(4) Number of dwelling houses not reasonably fit for human habitation 182

2. Remedy of Defects without service of formal notice:

Number of dwelling houses rendered fit by informal notice 124

3. Action under Statutory Powers:

(a) Proceeding under Section 28 House Town Planning Act, 1919—

(1) Number of dwelling house notices served requiring repairs ... ... Nil

(2) Number of dwelling houses rendered fit—

(a) By Owner ... ... Nil

(b) By Local Authority in default ... Nil

(b) Proceedings under Public Health Acts—

(1) Number of dwelling houses in respect of which notices were served requiring defects to be remedied 58

(2) Number of dwelling houses in which defects were remedied—

(a) By Owners 46

(b) By Local Authority in default of owners 2

(c) Proceedings under Sections 17 and 18 House Town Planning Act, 1909—

(1) Number of reports made with a view to Closing Order 4

(2) Number of dwelling houses in respect of which Closing Orders were made ... 4

(3) Number of dwelling houses in respect of which Closing Orders were determined ... Nil

(4) Number of dwelling houses in respect of which Demolition Orders were made ... 3

(5) Number of dwelling houses demolished ... 3

In conclusion, I wish to express my sincere thanks and indebtedness for much information and help in the

preparation of this report I have received from your Clerk, Mr. W. Plews, your Sanitary Inspectors, Messrs. W. & T. Morley, and your Architect, Mr. J. Gibson Cowe.

I remain, Gentlemen,

Your obedient servant,

F. R. V. LANGENBERG, M.B., C.M.,

Medical Officer of Health.

To the Houghton-le-Spring
Rural District Council.

TABLE I.

Vital Statistics of Whole District during 1921, and Previous Years.

Year	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths.		Nett Deaths belonging to the District.			
		Un-corrected Number	Nett.				of Non-residents registered in the District.	of Resi-dents not registered in the District.	Under 1 Year of Age		At all Ages.	
			Number.	Rate	Number.	Rate.			Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1916	*26,596 †24,444	...	633	23·80	307	12·51	7	27	73	115·32	334	13·66
1917	*27,170 †24,374	...	647	23·81	292	11·98	4	32	82	126·73	324	13·29
1918	*26,552 †23,697	...	687	25·87	366	15·4	14	39	77	112·08	405	17·13
1919	*27,125 †26,039	757	769	28·35	425	16·32	8	42	114	148·24	467	17·93
1920	27,077	1028	1037	38·29	338	12·48	4	46	116	111·86	380	14·03
1921	27,810	829	860	30·92	355	12·76	11	38	102	118·6	383	13·73

* For Birth Rate. † For Death Rate. Rates in columns 5, 7, and 13 are calculated per 1,000 of population.

NOTE.—The deaths in column 6 of this table are the whole of those registered during the year as having actually occurred within the district. The deaths in column 12 are the number in column 6 plus the number in column 9 and minus the number in column 8.

By the term "Non-Residents" is meant persons who died in the district, but whose usual residence was outside it, and by the term "Residents" is meant persons whose usual residence was in the district, but who died outside it.

Area of District in acres (land and inland water), 13,190

Total population at all ages	27,327
Total families or separate occupiers ...	5,725
Number of inhabited houses	5,525
Average number of persons per house ...	4·9

TABLE II.

Cases of Infectious Disease Notified during the year 1921.

Notifiable Disease.	Attack Rate for Year 1920.	Number of Cases Notified.								Total Cases Notified in each Locality.														Total Cases Removed to Hospital.
		At all Ages.	At Ages—Years.							Eppleton Great and Little.	Herrington E. and M.	Herrington West.	Moorsley.	Morton Grange.	Newbottle.	Offerton.	Penshaw.	Rainton E.	Rainton W.	Silksworth.	Warden Law.	Moorhouse.	Total.	
			Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65.	65 and Upwards.															
Small-pox	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Cholera (C) Plague (P) ...	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Diphtheria (including Membraneous Croup)...	·82	23	1	1	19	1	1	...	...	...	...	5	1	1	11	...	4	1	...	...	...	...	23	...
Erysipelas	·35	10	...	...	3	...	2	4	1	...	...	1	1	1	3	...	1	1	1	1	...	...	10	...
Scarlet Fever	3·7	103	...	17	77	9	...	...	...	...	...	13	...	2	12	...	30	26	8	12	...	...	103	...
Typhus Fever	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Enteric Fever	·10	3	...	...	...	...	1	2	...	...	...	..	...	...	3	...	...	...	...	...	...	...	3	...
Relapsing Fever (R) ...	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Continued Fever (C) ...	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Puerperal Fever	·07	2	...	...	...	1	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	2	...
Cerebro-spinal Meningitis.	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Poliomyelitis	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Pulmonary Tuberculosis ...	1·1	33	...	...	2	10	16	5	...	...	...	4	3	...	7	1	12	1	3	2	...	...	33	...
Other forms of Tuberculosis	1·2	34	3	9	16	2	3	1	...	...	...	4	...	2	11	3	6	2	3	3	...	...	34	...
Ophthalmia Neonatorum...	·32	9	9	...	...	...	...	...	...	...	...	...	...	...	1	1	6	...	1	...	...	...	9	...
Encephalitis Lethargica ...	...	Nil	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
Pneumonia	1·5	42	...	7	10	10	8	5	2	...	...	2	1	1	12	1	12	5	8	...	...	...	42	...
Dysentery	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Nil	...
		259	13	34	127	33	32	17	3	...	1	29	6	7	61	6	71	36	24	18	...	...	259	...

TABLE III.

Causes of, and Ages at Death during the year 1921.

Causes of Death.	Nett Deaths at the subjoined Ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District
	All Ages	Under 1 year	1 and under 2	2and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and up-w'ds	
1	2	3	4	5	6	7	8	9	10	11
All Causes { Certified ...	...	...	...	...	...	...	...	...	...	...
All Causes { Uncertified ...	7	1	...	...	...	...	1	1	4	...
Enteric Fever	...	...	...	...	...	...	...	...	...	...
Small Pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	..		...	...	...	...	...	...
Scarlet Fever	...	...	...		...	...	...	...	...	...
Whooping Cough	8	5	2	1	...	...	...	...	...	...
Diphtheria and Croup ...	3	1	...	1	1	...	...	...	...	...
Influenza	10	...	1	2	1	1	2	1	2	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis) ...	25	...	...		3	8	11	3	...	...
Tuberculous Meningitis ..	5	1	...	1	3	...	...	...	...	...
Other Tubercular Diseases ...	3	...	2	...	...	...	1	...	...	...
Cancer, malignant disease ...	29	...	...	...	...	...	2	16	11	...
Rheumatic Fever	1	...	...	...	...	...	1	...	...	...
Meningitis	3	1	...	...	1	...	...	...	1	...
Organic Heart Disease ...	28	...	...	...	...	1	5	15	7	...
Bronchitis	39	16	3	2	1	...	...	7	10	...
Pneumonia (all forms) ...	32	6	7	2	6	2	5	2	2	...
Other diseases of Respiratory Organs	6	...	1	...	1	1	1	2	...	...
Diarrhœa and Enteritis ...	22	17	5	...	...	...	...	...	...	...
Appendicitis	1	...	..	...	...	1	...	...	...	...
Cirrhosis of Liver	1	...	...	...	...	...	...	1	...	...
Alcoholism	...	...	...	...	...	...	...	...	...	...
Nephritis and Bright's Disease	14	...	1	...	...	...	2	2	9	...
Puerperal Fever	1	...	...	...	...	...	1	...	...	...
Other Accidents and Diseases of Pregnancy	5	...	...	...	...	4	1	...	...	...
Congenital Debility and Malformation, including Premature Birth	43	43	...	...	...	...	...	...	...	...
Violent Deaths, excluding Suicide	12	...	...	1	5	1	3	2	...	...
Suicide	2	...	...	...	...	...	1	...	1	...
Other Defined Diseases ...	87	12	2	3	3	1	10	13	43	...
Diseases Ill-defined or Unknown	3	...	...	...	...	...	1	...	2	...
Cerebro Spinal Fever ...	...	...	...	...	...	...	...	...	...	...
Totals	382	102	24	13	25	20	47	64	88	...

TABLE IV.

Infant Mortality during year ended 31st December, 1921.

Nett deaths from stated causes at various ages under 1 year of age.

Causes of Death.	Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 4 Weeks.	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 9 Months	9 Months and under 12 Mths.	Total Deaths under 1 Year.
All causes { Certified ...	...	...	...	...	...	...	...	...	...	...
All causes { Uncertified ...	1	...	...	...	...	...	...	...	...	...
Small-pox	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Whooping-cough	...	...	...	...	...	2	1	1	1	5
Diphtheria and Croup ...	...	...	...	...	...	...	...	...	1	1
Erysipelas	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis ...	...	...	...	...	...	...	1	...	...	1
Abdomoninal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases...	...	...	...	...	...	...	...	...	...	...
Meningitis *(not Tuberculous)*	...	...	...	...	...	1	...	...	...	1
Convulsions	...	1	1	...	2	1	...	1	1	5
Laryngitis	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	1	1	1	5	4	5	16
Pnemonia (all forms) ...	...	...	...	...	...	1	2	1	2	6
Diarrhoea	...	...	...	...	...	...	3	1	1	5
Enteritis	...	2	...	...	2	2	4	3	1	12
Gastritis	...	...	...	...	...	3	1	1	...	5
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
Suffocation, overlying ...	...	...	...	...	...	...	...	...	...	...
Injury at Birth	1	...	...	...	1	...	...	...	...	1
Atelectasis	1	...	...	...	1	...	...	...	...	1
Congenital Malformations	1	...	...	...	1	...	...	...	...	1
Premature Birth	18	1	1	...	20	...	1	1	...	22
Atrophy, Debility and Marasmus	10	4	...	3	17	1	2	...	...	20
Other causes	...	...	...	...	...	...	...	...	...	...
	31	8	2	4	45	12	20	13	12	102